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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,295	01/10/2006	Minne Van Der Veen	NL 030876	7975
24737 7590 09/03/2008 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
POOMORE, TRAVIS D				
ART UNIT		PAPER NUMBER		
4148				
MAIL DATE		DELIVERY MODE		
09/03/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/564,295

**Applicant(s)**

VAN DER VEEN ET AL.

**Examiner**

TRAVIS POGMORE

**Art Unit**

4148

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 10 January 2006
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The instant application having Application No. 10/564295 filed on January 10, 2006 is presented for examination by the examiner.

#### ***Oath/Declaration***

2. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in 37 C.F.R. 1.63.

#### ***Priority***

3. As required by M.P.E.P. 201.14(c), acknowledgement is made of applicant's claim for priority based on applications filed on July 10, 2003.
4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

5. As required by M.P.E.P. 609, the applicant's submissions of the Information Disclosure Statements dated January 10, 2006 and December 4, 2006 are acknowledged by the examiner and the cited references have been considered in the examination of the claims now pending.

#### ***Drawings***

6. The applicant's drawings submitted are acceptable for examination purposes.

### ***Claim Objections***

7. Claim 1 is objected to because of the following informalities: The statement "method of simplifying embedding of watermarks" is unclear, in particular it is not clear if it refers to a simplification of a known method (then the claim should be divided in two part form with the known features included in the preamble) or if it refers to a new method of embedding watermarks (in this case the term simplifying should be deleted).
8. Claim 10 is objected to because of the following informalities: It is listed as being dependent upon itself. As it cannot be dependent upon itself, for the purposes of this examination it is assumed that claim 10 is dependent upon the immediately preceding claim 9.
9. Claim 21 is objected to because of the following informalities: It is listed as being dependent upon claim 22. As there is no claim 22, and claim 21 could not properly depend from it even if it existed, for the purpose of this examination it is assumed that claim 21 is dependent upon the immediately preceding claim 20. Appropriate correction is required.

### ***Claim Rejections – 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
11. Claims 1, 9, 11, 18 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recited terms "watermarking

properties" and "signal dependent properties" do not distinctly claim the invented subject matter and render thus render the claims indefinite. The terms are not clearly defined in the specification and are so broad as to render the claims unclear to a person possessing the ordinary level of skill in the art. Nowhere in the disclosure is there a definition or even example of what the watermarking properties actually consist of.

Claims 2-8, 10, 12-17, 19 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for at least the reason stated above. Claims 2-8 are dependent on claim 1; however, they do not add any feature or subject matter that would solve any of the indefiniteness of claim 1. Claim 10 is dependent on claim 9; however, it does not add any feature or subject matter that would solve any of the indefiniteness of claim 9. Claims 12-17 are dependent on claim 11; however, they do not add any feature or subject matter that would solve any of the indefiniteness of claim 11. Claim 19 is dependent on claim 18; however, it does not add any feature or subject matter that would solve any of the indefiniteness of claim 18. Claim 21 is dependent on claim 20; however, it does not add any feature or subject matter that would solve any of the indefiniteness of claim 20.

### ***Claim Rejections – 35 USC § 101***

12. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

13. Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter for the following reason: The claim fails to place

the invention squarely within one statutory class of invention. The claim is a signal *per se*. As such, the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore this claim is not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefore not a composition of matter.

Claim 21 is rejected under 35 U.S.C. 101 as non-statutory for at least the reason stated above. Claim 21 is dependent on claim 20; however, it does not add any feature or subject matter that would solve any of the non-statutory deficiencies of claim 20.

### ***Claim Rejections – 35 USC § 102***

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-4, 7-8, 11-14, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Pub. No. US 2001/0025341 A1 (hereinafter “Marshall”).

As to claim 1, Marshall teaches a method of simplifying embedding of watermarks in different copies of a media signal comprising the steps of:

determining watermarking properties dependent on a media signal (page 3, column 2, paragraph 35, the selected sections comprising the watermarking properties), and

storing the signal dependent properties, such that the signal dependent properties can be used when embedding unique watermarks in different copies of the media signal (page 3, column 2, paragraphs 36-37, only those selected sections are copied and embedded with elementary watermarks, so these copies comprise the stored signal dependent properties).

As to claim 2, Marshall teaches further comprising the step of sending the media signal together with information at least based on the signal dependent properties to at least one recipient (page 3, column 2, paragraph 39, wherein the information based on the signal dependent properties is a transaction specific watermark).

As to claim 3, Marshall teaches further comprising the step of embedding unique watermarks in different copies of the media signal using the stored signal dependent properties and wherein the step of sending comprises sending a copy of the media signal to each recipient with an embedded unique watermark (page 3, column 2, paragraph 39, a transaction specific watermark is by definition unique)

As to claim 4, Marshall teaches further comprising the step of mixing watermarks for providing a unique mix of the watermarks in copies of the media signal (page 4, column 1, paragraph 42).

As to claim 7, Marshall teaches wherein the signal dependent properties are based on a perceptual model of a human sensing system (page 3, column 2, paragraph 35, lines 1-5 and 8-14, considering which sections are more likely to be noticed (and thus tampered with less) and which sections are harder to hide watermark data in inherently requires a perceptual model of the human sensing system).

As to claim 8, Marshall teaches wherein the steps of determining and storing are performed off-line and the step of sending is performed on-line (Figs. 2-3 and page 3, column 1, paragraphs 32-33, the preprocessing stage being off-line, i.e. in advance of delivery to a recipient).

As to claim 11, Marshall teaches a device for simplifying the embedding of watermarks in different copies of a media signal comprising a server unit including:

- a properties determining unit for determining signal dependent watermarking properties of a media signal (page 3, column 2, paragraph 35, the selected sections comprising the watermarking properties), and

- a signal properties store for storing the signal dependent properties, such that the signal dependent properties can be used for embedding unique watermarks in different



copies of the media signal (page 3, column 2, paragraphs 36-37, only those selected sections are copied and embedded with elementary watermarks, so these copies comprise the stored signal dependent properties).

As to claim 12, Marshall teaches further comprising a sending unit arranged to send the media signal together with information at least based on the signal depending properties to at least one recipient (page 3, column 2, paragraph 39, wherein the information based on the signal dependent properties is a transaction specific watermark).

As to claim 13, Marshall teaches further comprising at least one watermarking unit for embedding unique watermarks in different copies of the media signal using the stored signal dependent properties for enabling the sending of a uniquely watermarked media signal to each recipient (page 3, column 2, paragraph 39, a transaction specific watermark is by definition unique).

As to claim 14, Marshall teaches wherein the sending unit further comprises a mixing unit arranged to mix watermarks such that the unique watermark sent to a recipient is a unique mix of the generated watermarks (page 4, column 1, paragraph 42).

As to claim 17, Marshall teaches wherein the properties determining unit is arranged to determine the signal dependent properties based on a perceptual model of a human sensory system (page 3, column 2, paragraph 35, lines 1-5 and 8-14, considering which sections are more likely to be noticed (and thus tampered with less) and which sections are harder to hide watermark data in inherently requires a perceptual model of the human sensing system).

16. Claims 9, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Pub. No. US 2002/0120849 A1 (hereinafter "McKinley et al.").

As to claim 9, McKinley et al. teaches a method of embedding a watermark in a media signal (page 11, column 1, paragraph 135, lines 1-5 and 10-18) comprising the steps of:

- receiving a media signal together with certain watermarking properties dependent on the media signal (Fig. 4, references 420-430, where the watermarking properties dependent on the media signal are the "perceptual mask" as recited in page 7, column 1, paragraph 93 and page 10, column 1, paragraph 124, and the media signal is the "input signal"), and
- embedding a watermark based on the signal dependent properties in a copy of the media signal (Fig. 4, reference 428, creating 430).

As to claim 18, McKinley et al. teaches a device for embedding a watermark in a media signal comprising:

- a receiving unit for receiving a media signal together with certain watermarking properties dependent on the media signal (page 11, column 1, paragraph 135, lines 1-5 and 10-18, the "watermark applicator" being the receiving unit, in order for the watermark applicator to combine the perceptual mask, the watermark information signal and the input signal it is inherent that that it be able to receive them utilizing a receiving unit), and

- a watermarking unit arranged to embed a watermark based on the signal dependent properties in a copy of the media signal (page 11, column 1, paragraph 135, lines 1-5 and 10-18).

As to claim 20, McKinley et al. teaches a signal for providing media content to a recipient comprising a media signal together with certain watermarking properties, which are dependent on the media signal (Fig. 4, references 420, 422 and 426, also page 11, column 1, paragraph 135, lines 1-5 and 10-18).

### ***Claim Rejections – 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall in view of McKinley et al.

As to claim 5, Marshall teaches the method according to claim 2, but does not specifically teach wherein the step of sending comprises sending the media signal together with the signal dependent properties, for enabling embedding of a watermark by a recipient.

However, McKinley et al. teaches wherein the step of sending comprises sending the media signal together with the signal dependent properties, for enabling embedding of a watermark by a recipient (Fig. 4, references 420-430, where the signal dependent properties are the "perceptual mask" as recited In page 7, column 1, paragraph 93 and page 10, column 1, paragraph 124, the media signal is the "input signal", and the recipient is the "watermark applicator" module as recited In page 11, column 1, paragraph 135, lines 1-5 and 10-18).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Marshall to separate the actual watermark embedding out into a separate system as in McKinley et al. because it allows the processing to be distributed over multiple systems allowing larger watermark tasks to be completed (McKinley et al., page 11, column 1, paragraph 134, lines 6-12).

As to claim 15, Marshall teaches the device according to claim 12, but does not specifically teach wherein the sending unit is arranged to send the media signal

together with the signal dependent properties for enabling embedding of a watermark by a recipient.

However McKinley et al. teaches wherein the sending unit is arranged to send the media signal together with the signal dependent properties for enabling embedding of a watermark by a recipient. (Fig. 4, references 418 and 420, where the sending unit is the perceptual analyzer and the recipient is the watermark applicator, both as recited in page 11, column 1, paragraph 135, lines 1-5 and 8-18).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Marshall to separate the actual watermark embedding out into a separate system as in McKinley et al. because it allows the processing to be distributed over multiple systems allowing larger watermark tasks to be completed (McKinley et al., page 11, column 1, paragraph 134, lines 6-12).

19. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall in view McKinley et al. and further in view of PCT Application Pub. No. WO 03/055130 A1 (hereinafter "Tian et al.").

As to claim 6, Marshall and McKinley et al. teach the method according to claim 5, but do not specifically teach further comprising the step of losslessly encoding the signal dependent properties in the media signal.

However, Tian et al. teaches further comprising the step of losslessly encoding the signal dependent properties in the media signal (Fig. 1E, where the "original image" is the media signal, and the "auxiliary data" is the signal dependent properties).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Marshall and McKinley et al. to losslessly encode the properties into the signal itself as in Tian et al. because it allows all of the necessary data required to watermark the media signal to be compressed into a single signal without the loss of any of the original data.

As to claim 16, Marshall and McKinley et al. teach the device according to claim 15, but do not specifically teach further comprising a lossless encoding unit for losslessly encoding the signal dependent properties in the media signal.

However, Tian et al. teaches further comprising a lossless encoding unit for losslessly encoding the signal dependent properties in the media signal (Fig. 1E, where the "original image" is the media signal, and the "auxiliary data" is the signal dependent properties).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Marshall and McKinley et al. to use a lossless encoding unit and losslessly encode the properties into the signal itself as in Tian et al. because it allows all of the necessary data required to watermark the media signal to be compressed into a single signal without the loss of any of the original data.

20. Claims 10, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinley et al. in view of Tian et al.

As to claim 10, McKinley et al. teaches the method according to claim 9, but does not specifically teach wherein the signal properties are losslessly encoded in the media signal and further comprising the step of losslessly decoding the signal properties from the media signal.

However, Tian et al. teaches wherein the signal properties are losslessly encoded in the media signal and further comprising the step of losslessly decoding the signal properties from the media signal (Figs. 1E and 1F, where the "original image" is the media signal, and the "auxiliary data" is the signal dependent properties).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify McKinley et al. to losslessly encode the properties into the signal itself as in Tian et al. because it allows all of the necessary data to watermark the media signal to be compressed into a single signal without the loss of any of the original data.

As to claim 19, McKinley et al. teaches the device according to claim 18, but does not specifically teach wherein the signal properties are losslessly encoded in the media signal and further comprising a lossless decoding unit for losslessly decoding the signal properties from the media signal.

However, Tian et al. teaches wherein the signal properties are losslessly encoded in the media signal and further comprising a lossless decoding unit for losslessly decoding the signal properties from the media signal (Figs. 1E and 1F, where the "original image" is the media signal, and the "auxiliary data" is the signal dependent properties).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify McKinley et al. to losslessly encode the properties into the signal itself as in Tian et al. because it allows all of the necessary data to watermark the media signal to be compressed into a single signal without the loss of any of the original data.

As to claim 21, McKinley et al. teaches the signal according to claim 20, but does not specifically teach wherein the properties are losslessly embedded in the media signal.

However, Tian et al. teaches wherein the properties are losslessly embedded in the media signal (Fig. 1E, where the "original image" is the media signal, and the "auxiliary data" is the signal dependent properties).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify McKinley et al. to losslessly encode the properties into the signal itself as in Tian et al. because it allows all of the necessary data to watermark the media signal to be compressed into a single signal without the loss of any of the original data.



### ***Conclusion***

21. The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure. See MPEP 707.05(c).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRAVIS POGMORE whose telephone number is (571)270-7313. The examiner can normally be reached on Monday through Thursday between 7:30 a.m. and 5:00 p.m. eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Pham can be reached on 571-272-3689. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Supervisory Patent Examiner, Art Unit 4148

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